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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,205	03/25/2004	Toshimitsu Hirai	9319S-000717	5980
27572	7590	11/03/2006	EXAMINER	
HARNESSE, DICKEY & PIERCE, P.L.C.			TALBOT, BRIAN K	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	
			1762	

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/809,205	HIRAI, TOSHIMITSU	
	Examiner	Art Unit	
	Brian K. Talbot	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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1. The amendment filed 8/23/06 has been considered and entered. Claims 8,9 and 12-20 have been canceled. Claims 1-7,10 and 11 remain in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. In light of the amendment to the Title, the objection has been withdrawn.
4. In light of the amendment filed 8/23/06, the 35 USC 102 rejections have been withdrawn. However, the following 35 USC 103 rejections have been necessitated by the amendment.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7,10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banno et al. (6,761,925) (a) alone or (b) in combination with Applicant's admitted state of the art, specification, pg. 2 [0006].

Banno et al. (6,761,925) teaches an electron-emitting device, apparatus and production method thereof. A method of forming a pair of electrodes and an electrically conductive thin film on a substrate comprising applying a metal element solution in droplet form (abstract). Looking at Figs. 31A-33D, droplets of the metal solution are applied in a variety of fashions including a single drop (Fig. 31A), a line of drops (Fig. 31B) or a plurality of drops in a width proportion (Fig. 31C) for make the connection between the electrodes (col. 36, line 5 – col. 37, line 20).

Banno et al. (6,761,925) fails to specifically teach forming the periphery portion of the film prior to the interior portion of the film.

(a) While the Examiner acknowledges this fact that Banno et al. (6,761,925) is silent with respect to the arrangement of the droplets and when they are deposited, Banno et al. (6,761,925) does teach that it is not necessary that the dots to be deposited successively from a dot to an adjacent dot from left to right or in the opposite direction, and dots may be deposited in an arbitrary order. For example, dots may be deposited at every other dot location first and then a dot may be deposited in each space (col. 37, lines 34-40).

(b) Applicant's admitted state of the art, specification, pg. 2 [0006] discloses, "when the wiring patterns have a large line width, the droplets may be arranged in a line-width direction, but deviation in the line width may occur, for example, in a case where the droplets for forming both end portions in the line-width direction are first arranged and then the droplets for forming a central portion are arranged to fill a space between both end portions, or in a case where the central portion in the line-width direction is first formed and then the droplets for forming both end portions are arranged. That is, when the central portion in the line-width direction is first

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formed and then the droplets for forming both end portions are arranged, a phenomenon that the droplets are drawn toward the central portion occurs, so that the line width thereof may be narrowed, compared with a case where both ends are first formed and then the central portion is formed.”

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified Banno et al. (6,761,925) process by arranging the droplets to form the periphery part of the film prior to forming the central portion of the film as evidenced by Banno et al. (6,761,925) or (b) in combination with Applicant's admitted state of the art, specification, pg. 2 [0006] with the expectation of achieving similar success as the arrangement of the deposited droplets is not found to be a critical feature as disclosed by the prior art.

Claims 1-7,10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09-245,689 in combination with Applicant's admitted state of the art, specification, pg. 2 [0006].

JP 09-245,698 teaches a manufacture of electron emitter, electron-source substrate and image forming device. A conductive film (4) is applied between a pair of electrode 2,3 by imparting droplets of the solution. The ink-jet type droplet imparting means is used has a line of plural nozzles arranged at intervals each smaller than the diameter of a dot pattern to impart a plurality of droplets at a time to form the conductive film (abstract and Figs. 1-3).

JP 009-245,698 fails to specifically teach forming the periphery portion of the film prior to the interior portion of the film.

Features described above concerning the teaching of Applicant's admitted state of the art, specification, pg. 2 [0006].

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified JP 009-245,698 process by arranging the droplets to form the periphery part of the film prior to forming the central portion of the film as evidenced by Applicant's admitted state of the art, specification, pg. 2 [0006] with the expectation of achieving similar success.

With respect to the step of "defining a pattern forming area", Banno et al. (6,761,925) and JP 009-245,698 teach the step of "defining" the pattern forming area by forming the electrodes and depositing the metal solution there between. The step of "sequentially arranging the droplets in the area" is met by the deposited plurality of droplets. Also, Banno et al. (6,761,925) teaches pre-treating the substrate to produce a hydrophilic surface to aid in the deposition of the subsequent coating. This would also constitute the "defining" step.

### ***Response to Amendment***

6. Applicant's arguments with respect to claims 1-7,10 and 11 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argued that the prior art fails to teach forming the periphery portion of the film prior to the interior portion of the film.

Applicant's admitted state of the art, specification, pg. 2 [0006] teaches this limitation as detailed above. In addition, Banno et al. (6,761,925) teaches that the arrangement of the

deposited droplets is not critical to the formation of the film pattern. Also, Banno et al. (6,761,925) depicts this in Figs. 31C, 32B, 33B and 33D.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Brian K Talbot  
Primary Examiner  
Art Unit 1762

BKT